

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously Presented) A method of detecting an abnormal video signal in a display device of a computer system, comprising:

receiving an R,G,B signal including a video signal, a horizontal synchronization signal and a vertical synchronization signal from a host of the computer system;

selecting one of an R, a G, or a B component of the R,G,B signal including the video signal as a selected one R,G, or B component and setting a region of the selected one R,G, or B component as a checked region which is checked;

detecting a minimum pixel level value in the checked region;

comparing the minimum pixel level value for the selected one R,G, or B component with a predetermined threshold value to determine whether an abnormal R,G, or B component is present, the abnormal R,G, or B component being a component abnormally input due to malfunction of the host; and

displaying on a screen a message indicating whether the selected one R,G, or B component includes a video signal abnormally input due to the malfunction of the host.

2. (Previously Presented) The method of claim 1, wherein the comparing comprises:

setting a flag which indicates whether the selected one R,G, or B component is abnormal when the minimum pixel level value is smaller than a predetermined threshold value, and

resetting the flag when the minimum pixel level value is larger than the predetermined threshold value.

3. (Previously Presented) The method of claim 1, wherein the displaying comprises: checking whether a flag indicating whether the selected one R,G, or B component is abnormal is set;

checking if a video signal checking function is enabled when the flag is set; and

setting how long the message will be displayed and how long a predetermined warning

message is displayed, when enabling of the video signal checking function is confirmed.

4. (Previously Presented) A display device comprising:

a signal inputting unit receiving R,G,B signals from a host of a computer system including video signals, a horizontal synchronization signal, and a vertical synchronization signal;

a minimum value detector detecting a minimum pixel level value in a particular region of a selected one of an R, a G, or a B component input from the signal inputting unit, the selected one R, G, or B component being an R, a G, or a B component of the received R, G, B signals;

a controller comparing the minimum pixel level value with a predetermined value to determine whether the selected one R, G, or B component includes an abnormal video signal caused by malfunction of the host; and

a warning message indicating an abnormal state of the selected one R, G, or B component caused by malfunction of the host, as determined by the controller.

5. (Previously Presented) The display device of claim 4, wherein the minimum value detector comprises:

a signal selector selecting one of the received R, G, B components;

a storage unit stores the minimum pixel level value detected in the particular region of the selected one R, G, or B component; and

a comparator comparing the minimum pixel level value in the particular region of the selected one R, G, or B component with a stored minimum pixel level value detected in a particular region of a previous R, G, B component, and thereby detects the minimum pixel level value .

6. (Original) The display device of claim 4, wherein the controller generates an on-screen-display (OSD) signal that enables and disables an R, G, B, signal checking function.

7. (Previously Presented) A method of detecting an abnormal video signal in a display device, comprising:

receiving R, G, B signals including video signals, a horizontal synchronization signal, and a vertical synchronization signal from a host of a computer system;

detecting a minimum pixel level value of an R, a G, or a B component selected from the received R, G, B signals, the selected one R, G, or B, component being an R, a G, or a B component of the received R, G, B signals;

determining whether the selected one R,G, or B component is abnormally input due to malfunction of the host, based on a comparison between the minimum pixel level value in the selected one R,G, or B component and a predetermined value; and

displaying on a screen a message indicating whether the selected one R,G, or B component includes a video signal abnormally input due to the malfunction of the host.

8. (Previously Presented) The method of claim 7, wherein the determining comprises:

comparing the minimum pixel level value within the selected one R,G, or B component with the predetermined value;

extracting a minimum pixel level value when the pixel level value in the selected one R,G, or B component is smaller than the predetermined value.

9. (Previously Presented) The method of claim 7, wherein the determining comprises:

setting a flag indicating whether the selected one R,G, or B component is abnormal when the minimum pixel level value is smaller than the predetermined value, and

resetting the flag when the minimum pixel level value is larger than the predetermined value.

10. (Previously Presented) The method of claim 7, wherein the displaying comprises:

checking whether a flag indicating whether the selected one R,G, or B component is abnormal is set;

checking if a video signal checking function is enabled when the flag is set; and

setting how long the message will be displayed and how long a predetermined warning message is displayed on the screen when the video signal checking function is enabled.

11. (Previously Presented) A display device, comprising:

a signal inputting unit receiving R,G,B video signals, a horizontal synchronization signal and a vertical synchronization signal from a host of a computer system;

an abnormal state detector detecting an abnormal video signal in an R, a G, or a B component caused by malfunction of the host, the R, a G, or a B component selected from among the received R,G,B signals based on a comparison of a detected pixel level value of the selected one R,G, or B component and a predetermined value, the selected one R,G, or B

component being an R, a G, or a B component of the received R,G,B signals; and
a warning message indicator indicating whether a video signal abnormally input due to
the malfunction of the host is detected.

12. (Previously Presented) The display device of claim 11, wherein the abnormal state detector comprises:

a minimum value detector detecting a minimum pixel level value in the selected one R,G, or B component; and

a controller which compares the minimum pixel level value with a predetermined value and checks if the selected one R,G, or B component is abnormal.

13. (Previously Presented) The display device of claim 12, wherein the minimum value detector comprises:

a signal selector selecting one of the received R, G, or B components;

a storage unit storing the minimum pixel level value detected in the selected one R,G, or B component;

a comparator comparing the minimum pixel level value in the selected R,G,B component with a minimum pixel level value detected in a previous signal, and extracts a minimum pixel level value.

14. (Previously Presented) The display device of claim 12, wherein the controller generates a set flag when an abnormal signal is detected.

15. (Previously Presented) The display device of claim 11, wherein the controller generates an on-screen-display (OSD) signal that enables or disables a signal checking function.

16. (Previously Presented) A method of detecting an abnormal video signal in a display device, comprising:

receiving an R,G,B signal, a horizontal synchronization signal and a vertical synchronization signal from a host of a computer system;

selecting each of an R, a G, and a B component from an R,G,B signal received from a host of a computer system as a selected R,G, and B component and setting a region of the selected R,G, and B component as a checked region;

comparing the minimum pixel level value for the selected R,G, and B components with a predetermined threshold value to determine whether an abnormal R,G, and B component is present due to malfunction of the host, the abnormal R,G, or B component being a component abnormally input due to malfunction of the host; and

displaying a message on a screen indicating whether the selected R,G, and B component includes a video signal abnormally input due to the malfunction of the host.